

Work Order ID 59242

Friday, May 28, 2010 9:51:19 AM



Page 1

Item ID: D3690-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Glareshield

Start Date: 5/27/2010 Start Qty: 3.00



Cust Item ID:

Required Date: 6/4/2010 Req'd Qty: 3.00



Customer:

Reference:

Approvals:

Process Plan:

*H*Date: *10-5-28*

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3690

Rev B

100

0.00



HAND FINISHING THERMOFORMING

Thermoform

Memo

0.00

Thermoforming Machine

Set up machine frame and program as per Folio FTA 019

10/05/31

110

0.00



HAND FINISHING THERMOFORMING

Thermoform

Memo

0.00

Thermoforming Machine

Cut Blanks to fit frame size 69.5" X 35.5"

10/06/01
X3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
115	Dry Material	0.00							
	HandThermo	Memo 0.00							
	Hand Finishing Thermoforming	Dry Sheet as per QSI022 POLYCARBONATE							
	Temp: 240F BB								
	Time IN: 4:30 PM 10/05/01								
	Time OUT: 7:00 AM 10/06/01								BB 10/06/01
120	THERMOFORMING MACHINE	0.00							
	Thermoform	Memo 0.00							
	Thermoforming Machine	Thermoform as per Dwg. D3690-1 and Folio FTA 019 <input type="checkbox"/> Dwg. Rev. <input checked="" type="checkbox"/> Folio Rev. C							BB 10/06/01 X3
130	QC2- Inspect parts off machine FAI/FAIB	0.00							
	QC	Memo 0.00							
	Quality Control	Visually inspect for proper formation of each part							BB 10/06/01

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Reference:

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00							<i>10/06/01</i> <i>X3</i>
150 Thermoform Thermoforming Machine	HAND FINISHING THERMOFORMING Memo Trim to Finished Dimensions as per dwg D3690 using DT9036 / DT9043 template	0.00 0.00							<i>BB</i> <i>10/06/01</i> <i>X3</i>
160 QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo Check dimensions to ensure conformity to drawing tolerances.	0.00 0.00							<i>BB</i> <i>10/06/01</i>

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Customer:

Reference:

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

8.10.06/10

(23)

Quality Control

180

Identify as per dwg & Stock Location GA

0.00



Packaging

Memo

0.00

8.10.06/28

(3)

Packaging

190

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

10/06/29

Quality Control

10.10.06/29

W/O:		WORK ORDER CHANGES					
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Picklist Print

Friday, May 28, 2010 9:51:24 AM

Page 1

Work Order ID: 59242



Parent Item: D3690-1



Parent Item Name: Glareshield

Start Date: 5/27/2010

Required Date: 6/4/2010

Comments: IPP Rev A New Issue 08/04/28 DL verified by:DD
IPP Rev:B 08-07-14 revB as per dwg DD verified by:ec
IPP Rev:C 08-10-07 revC as per dwg DD verified by:EC Ipp Rev. D
Add Step 115 Dry Material 10/04/21 DL

Start Qty: 3.00

Required Qty: 3.00

MLEXS.093-F6006-02

Purchased

No

sf

1,136.296

26.31

78.96948



GE PLASTICS LEXAN SHEET

Location

Loc Qty

Loc Code

therm

1136.296

1136.296

110877

12/05/31
X3

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	59247
Description: Glareshield		Part Number:	D3690-1
Inspection Dwg: D3690	Rev: B	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Shape Definition	✓			
Free of visual flaws (bumps, cracks, voids, etc.)	✓			

Measured by: BB Date: 10/06/01

TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.20	+/-0.030	2.22	✓			
3.55	+/-0.030	3.62	✓			
0.040	Min	.061	✓			

Measured by: BB Date: 10/06/01

Audited by: Wh Date: 10/06/01

Prototype Approval: N/A Date: N/A

Rev	Date	Change	Revised by	Approved
A	08.09.12	New Issue	KJ/DL	<u>JS</u>

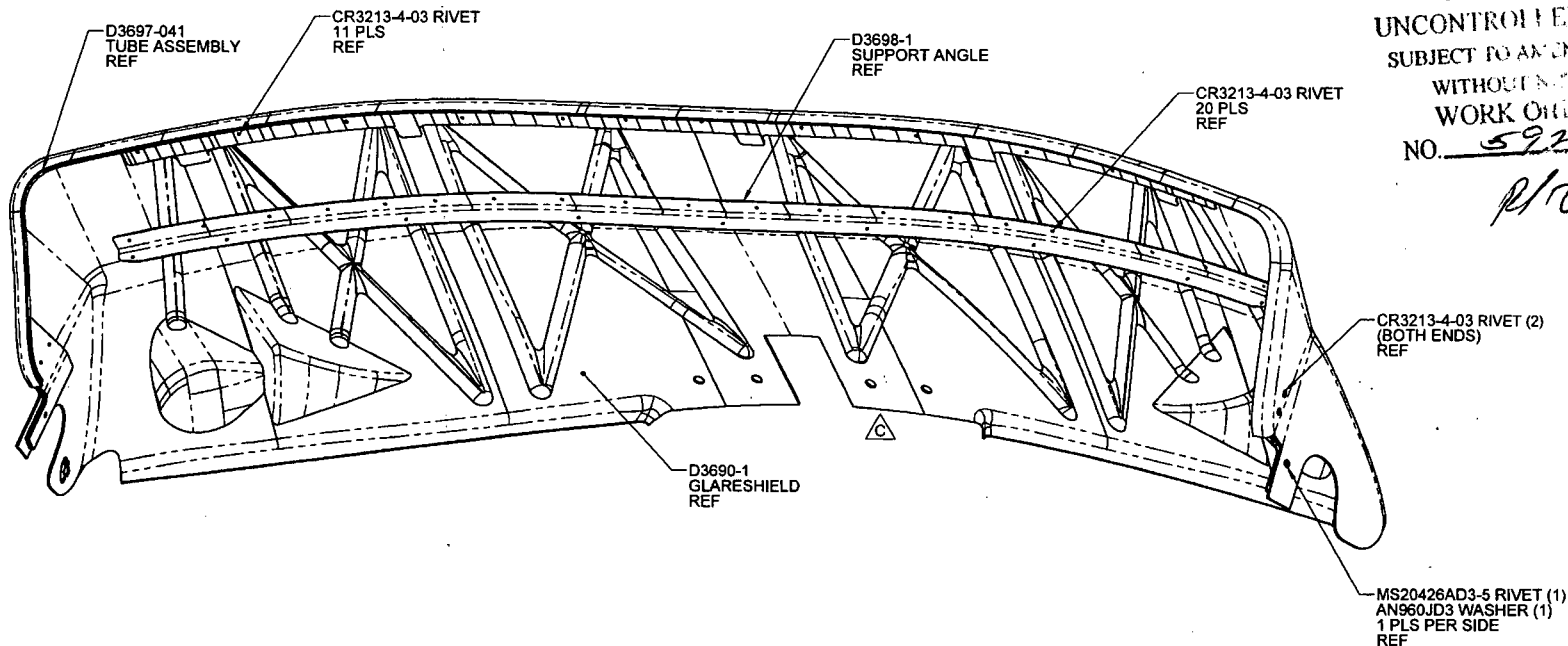
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PART LIST

QTY -041	PART NUMBER	DESCRIPTION
X	D3690-041	GLARESHIELD ASSEMBLY
1	D3690-1	GLARESHIELD
1	D3697-041	TUBE ASSEMBLY
1	D3698-1	SUPPORT ANGLE
2	AN960JD3	WASHER (OR NAS1149DN332J)
2	MS20426AD3-5	RIVET
35	CR3213-4-03	RIVET

D3690-041 GLARESHIELD ASSEMBLY

C	SHEET 1 PL MS20426AD3-5 RIVET WAS MS20426AD3-4, CR3213-4-03 RIVET WAS MS20470AD3-4, WASHER QTY WAS 6 (VIEWS UPDATED ACCORDINGLY). RIVETS ON SHEET 1 CHANGED TO REF QTY. RIVETS ON SHEET 2 CHANGED TO "HARD" CALLOUTS. SHADING REMOVED FROM ALL VIEWS FOR CLARITY.	AJS	08.09.02
B	ADD FINISH COAT & 1.0 TYP. SHEET 2 ZONES A, B & C, 5; ADD MIN THICKNESS. SHEET 3 ZONE A, B	RF	08.06.24
A	NEW ISSUE	RF	08.05.26
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. C
MFG. APPR.	RF	D3690	SHEET 1 OF 3
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	GLARESHIELD ASSEMBLY	NTS
DATE	08.09.02	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER NO. 59242
R/O 5-28

RELEASED
08.09.02

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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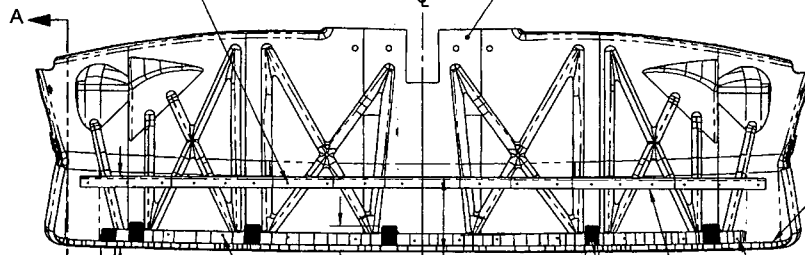
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8 7 6 5 4 3 2 1

TRANSFER DRILL $\phi 0.128$
FROM D3698-1 TO D3690-1
INSTALL
CR3213-4-03 RIVET, 20 PL
RIVET HEAD ON GLARESHIELD
OUTSIDE SURFACE

D3690-1
GLARESHIELD
REF



D3697-041
TUBE ASSEMBLY
REF

TRANSFER DRILL $\phi 0.144$
AT THIS LOCATION
FROM D3697-041 TO D3690-1
(NO HARDWARE INSTALLED)

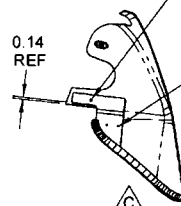
D3698-1
SUPPORT ANGLE
REF

TRANSFER DRILL $\phi 0.128$
FROM D3697-041 TO D3690-1
INSTALL
CR3213-4-03 RIVET, 11 PL
RIVET HEAD ON GLARESHIELD
OUTSIDE SURFACE

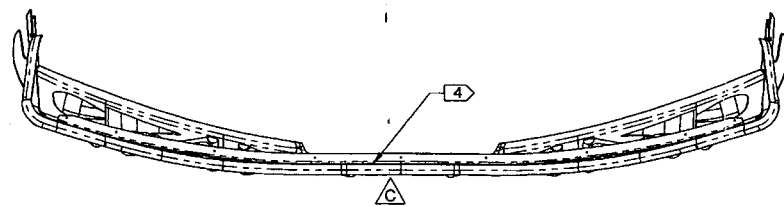
EQUAL DIMENSION
AT BOTH ENDS

TRANSFER DRILL $\phi 0.098$
FROM D3697-041 TO D3690-1
INSTALL
MS20426AD3-5 RIVET
AN960JD3 WASHER (ON GLARESHIELD
OUTSIDE SURFACE)
1 PER SIDE

TRANSFER DRILL $\phi 0.128$
FROM D3697-041 TO D3690-1
INSTALL
CR3213-4-03 RIVET 2
BOTH ENDS



SECTION A-A



D3690-041 GLARESHIELD ASSEMBLY

W/0 59242

RELEASED
08-09-14

NOTES:

- 1) CENTER D3697-041 AND D3698-1 ON TO D3690-1
- 2) FINISH: PAINT D3690-041 ASSY FLAT BLACK USING BASF GLASURIT 22 LINE CODE SFA39.50 PER DART QSI 005 4.2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) IDENTIFICATION: ETCH WITH DART P/N D3690-041 & B/N ON INSIDE OF PART
- 5) WEIGHT: 2.98 lbs
- 6) MASK HATCHED AREAS (6 PLS) ON INSIDE OF THE PART PRIOR TO PAINTING

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO. D3690	REV. C
MFG. APPR.		SHEET 2 OF 3	
APPROVED		TITLE GLARESHIELD ASSEMBLY	SCALE NTS
DE APPR.		COPYRIGHT © 2008 BY DART AEROSPACE LTD	
DATE	08.09.02	THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

8 7 6 5 4 3 2 1

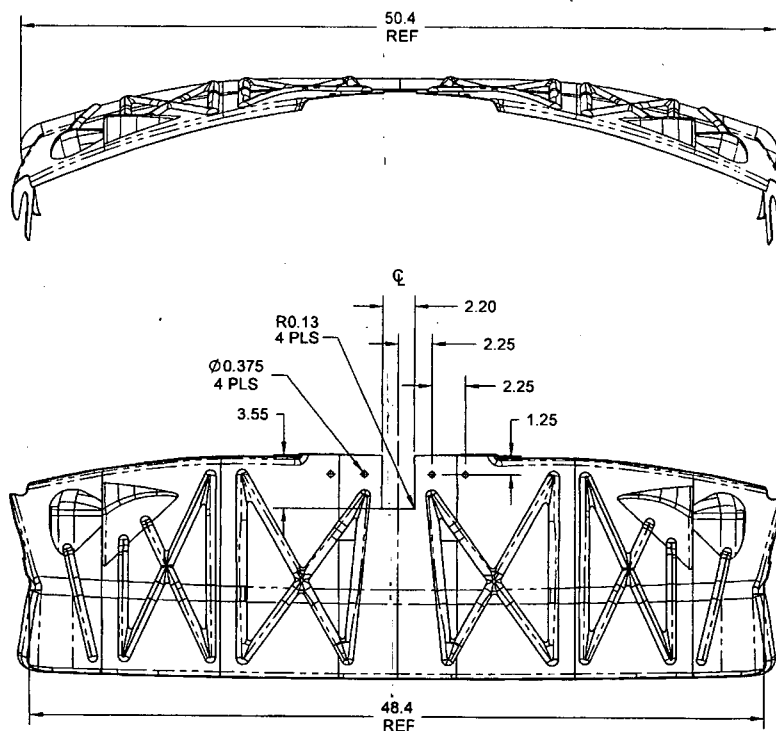
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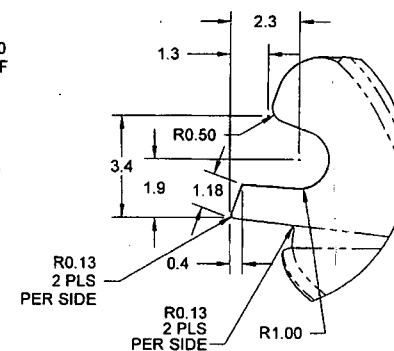
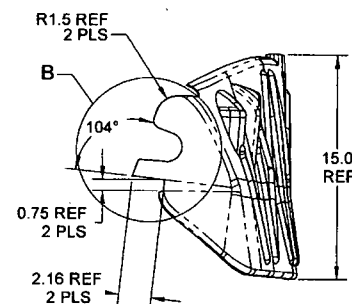
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w/o 59242



D3690-1 GLARESHIELD

NOTES:

- 1) MATERIAL: F6006 SUEDE/POLISHED 701 BLACK FLAT LEXAN SHEET 0.093 THICK
(REF DART SPEC MLEXS.093-F6006-02)
- 2) TOOLING: THERMOFORM PER MOLD DT9010 PER QSI 022
TRIM PER MOLD SCRIBE LINES EXCEPT WHERE NOTED
- 3) FINISH: NONE
- 4) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 2.5 lbs
- 9) MINIMUM THICKNESS AFTER FORMING IS 0.040

RELEASED
08.09.02

DETAILS
SCALE 2X
THIS VIEW FOR REFERENCE ONLY

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3690	SHEET 3 OF 3
APPROVED		TITLE	SCALE
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